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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/723,286

**Applicant(s)**

URSO, JOHN C.

**Examiner**

OLUSEYE IWARERE

**Art Unit**

4127

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-50 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)
- Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. This communication is a First Office Action Non-Final Rejection on the merits. Claims 1 – 50, as originally filed, are currently pending and have been considered below.

#### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. **Claims 1 – 10, 14, 15, 18, 21 – 30, 34, 35, and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sheldon et al. (5,765,143) and Agarwal et al. (2003/0101107), further in view of Horne (7,058,587).**

**As per claims 1 and 21**, Sheldon discloses an inventory forecasting method and system, comprising:

receiving a product total ([abstract]); the computer which generates the order data, which is construed as a product total) and a probability of product failure over a

predetermined amount of time (col. 4, see equation:  $R_{sub.a}$  is the failure rate per period P);

based on the product total ([sheldon abstract]; generating order data) and the probability of product failure (col. 4, see equation:  $R_{sub.a}$  is the failure rate per period P per vehicle of age "a" for the part);

However, Sheldon fails to explicitly disclose determining a gross material plan for a lifetime.

Horne teaches a system and method for allocating the supply of critical material components and manufacturing capacity with the feature of determining a gross material plan for a lifetime (col. 1, lines 24 - 30: a solution that optimizes material planning, which is construed as a gross material plan, based on product life cycles).

The combination of Sheldon and Horne disclose the claimed invention, but fail to explicitly disclose employing the gross material plan to develop at least one of:

(a) a releasing plan adapted to accomplish automatic release of products to a supply base based on volume assumptions determined as a function of the gross material plan;

(b) a customer quote based on an individual product price determined as a function of the gross material plan; and

(c) an income statement based on the individual product price and an estimated product volume determined as a function of the gross material plan.

Agarwal teaches an inventory management system and method with the feature of a releasing plan adapted to accomplish automatic release of products to a supply

base based on volume assumptions determined as a function of the gross material plan ([0079] The replacement policy of the spare components may be characterized by a minimum safety stock level expressed by the variable  $x$  in the below algorithms. When the number of components in stock reaches  $x$ , a replenishment order is released, and a selected quantity (discussed hereinafter) of the components are ordered).

From this teaching of Horne and Agarwal, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method and system for inventory management of Sheldon to include the gross material plan taught by Horne and the releasing plan taught by Agarwal in order to effectively provide service.

**As per claims 2 and 22**, Sheldon further discloses, comprising:

developing an actuarial table recording statistically averaged probabilities of product failure over the predetermined amount of time (col. 9, lines 7 – 25; discusses an actuarial method where the forecast is determined based on the failure rate per time period  $P$ ); and

organizing the table according to at least one of product composition, product location, product sub-system, and product function (col. 8, line 66 - col. 9, line 7; discusses the actuarial method for forecasting sales of one type of motor vehicle part, which is construed as product function organization).

**As per claim 3 and 23**, Sheldon further discloses, comprising:

breaking historical data (col. 12, lines 52 – 65; testing the modeling method implemented by the host computer by using historical data), crash data, down into data points (col. 13, line 5; order point calculation, which is construed as including data points) based on product categories including at least one of product composition, product location, product sub-system, and product function (col. 13, lines 7 – 8; manufacturer stock classification coding, which is construed as product function);

analyzing the data points to determine a statistical average a product of the categories will fail over a product service term (col. 4, see equation:  $R_{sub.a}$  is the failure rate per period P per vehicle of age "a" for the part);

developing at least one actuarial table recording statistically averaged probabilities of product failure (col. 3 line 66 – col 6 line 5; describes an actuarial method including failure rate);

tracking anomalies corresponding to deviations from expected results of releasing products (col. 12, lines 63 - 65; It may even be useful to apply historical deviations from the model's projections as a means of adjusting for unknown factors);  
and

employing the tracked anomalies as feedback (col. 12, lines 63 - 65; It may even be useful to apply historical deviations from the model's projections as a means of adjusting for unknown factors) in an actuarial table development and correction process (col. 3 line 66 – col. 4 line 5; describes an actuarial method, that includes the product sales).

However, Sheldon fails to explicitly disclose, material shelf life data, developing a releasing plan based on the statistically averaged probabilities and releasing products according to the releasing plan.

Agarwal teaches an inventory management system and method with the features of developing a releasing plan ([0079] describes an order replenishment system for a release of products) based on the statistically averaged probabilities ([0086] The average proportion  $p$  of non-defective spares); and

releasing products according to the releasing plan ([0079] describes an order replenishment system for a release of products);

However, the combination of Sheldon and Agarwal fails to explicitly disclose material shelf life data.

Horne teaches a system and method for allocating the supply of critical components and manufacturing capacity with the feature of material shelf life data (col. 13, lines 21 – 22; factors as limited shelf life).

From this teaching of Agarwal and Horne, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method and system for inventory management of Sheldon to include the material shelf life taught by Horne and the releasing plan taught by Agarwal in order to effectively provide service.

**As per claims 4 and 24**, Sheldon discloses the claimed invention but fails to explicitly disclose further comprising determining an inventory cost based on a product production cost and the gross material plan.

Horne teaches a system and method for allocating the supply of critical material components and manufacturing capacity with the feature of further comprising determining an inventory cost based on a product production cost and the gross material plan (col. 39, lines 38 – 40; the PCA will determine the ending inventory (cost) for each and every part in the user's material plan).

From this teaching of Horne, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method and system for inventory management of Sheldon to include the determining of an inventory cost taught by Horne in order to provide adequate information.

**As per claim 5 and 25**, Sheldon further discloses, comprising determining an individual product price (col. 15, lines 47 - 59; discusses selling price)

However, Sheldon fails to explicitly disclose, based on a product production cost and the gross material plan.

Horne teaches a system and method for allocating the supply of critical material components and manufacturing capacity with the feature of a product production cost and the gross material plan (col. 39, lines 38 – 40; the PCA will determine the ending inventory (cost) for each and every part in the user's material plan).

From this teaching of Horne, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method and system for inventory management of Sheldon to include the determining of an individual product



price and the gross material plan taught by Horne in order to provide adequate information.

**As per claims 6 and 26**, Sheldon disclose the claimed invention but fails to explicitly further disclose comprising:

determining an annual average as a fraction of the gross material plan, determining a quantity variability as a fraction of the annual average, determining a staggered production amount based on the quantity variability and a product minimum quantity and determining a staggered production cost based on the staggered production amount, the gross material plan and a product production cost.

Agarwal teaches an inventory management system and method with the feature of determining an annual average as a fraction ([0171] and [0172]; discuss average over a range of time);

determining a quantity variability as a fraction of the annual average ([0084] discusses deviation over time, which is construed as quantity variability); and

determining a staggered production cost (agrawal [0024]; discusses production cost).

However, the combination of Sheldon and Agarwal fail to explicitly disclose determining a staggered production amount based on the quantity variability and a product minimum quantity; and based on the staggered production amount, the gross material plan and a product production cost.

Horne teaches a system and method for allocating the supply of critical material components and manufacturing capacity with the features of determining a staggered production amount based on the quantity variability (col. 16, lines 16 – 38; discusses variable order quantity) and a product minimum quantity (col. 5, lines 25 - 59; discusses minimum product quantity); and

based on the staggered production amount, the gross material plan (col. 39, lines 22 – 35; discusses a material plan), and a product production cost (col. 16, lines 63 – 67; standard cost for each part); and

a gross material plan (col. 39, lines 22 – 35; discusses a material plan).

From this teaching of Agarwal and Horne, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method and system for inventory management of Sheldon to include the material shelf life taught by Horne and the releasing plan taught by Agarwal in order to effectively provide service.

**As per claim 7 and 27**, Sheldon discloses the claimed invention but fails to explicitly disclose, determining a roll out set up cost based on a product minimum quantity the gross material plan and an estimated set up cost.

Horne teaches a system and method for allocating the supply of critical material components and manufacturing capacity with the features of determining a roll out set up cost (table 3; Cost element rate code) based on a product minimum quantity (col. 5, lines 25 - 59; discusses a minimum amount of inventory), the gross material plan (col.

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39, lines 36 - 47; discusses material plan), and an estimated set up cost (col. 1, lines 53 - 60; cost associated with planning policies are construed as set up costs).

From this teaching of Horne it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method and system for inventory management of Sheldon to include the determining a roll out set up cost based on a product minimum quantity the gross material plan and an estimated set up cost taught by Horne in order to effectively provide service.

**As per claims 8 and 28**, Sheldon fails to explicitly further disclose comprising determining the releasing plan by assuming a volume based on the gross material plan and a fraction of the predetermined amount of time.

Agarwal teaches an inventory management system and method with the feature of determining the releasing plan by assuming a volume ([0079] discusses a replenishment order released which is construed as a releasing plan when stock reaches x, which is construed as a volume)

The combination of Sheldon and Agarwal disclose the claimed invention but fail to explicitly disclose based on the gross material plan and a fraction of the predetermined amount of time.

Horne teaches a system and method for allocating the supply of critical material components and manufacturing capacity with the feature of a gross material plan and a fraction of the predetermined amount of time (col. 39, lines 36 - 47; discusses material plan over a time span).

From this teaching of Agarwal and Horne it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method and system for inventory management of Sheldon to include the releasing plan taught by Agarwal and the material plan taught by Horne in order to effectively provide service.

**As per claim 9 and 29**, Sheldon further discloses comprising developing the customer quote (col. 15, line 47; determining the selling price, which is construed as a customer quote)

However, Sheldon fails to explicitly disclose based on a staggered material cost determined as a function of the gross material plan.

Horne teaches a system and method for allocating the supply of critical material components and manufacturing capacity with the feature of a staggered material cost determined as a function of the gross material plan (col. 39, lines 22 – 35; discusses a material plan).

From this teaching of Horne, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method and system for inventory management of Sheldon to include the material plan taught by Horne in order to effectively provide service.

**As per claims 10 and 30**, Sheldon discloses the claimed invention but fails to explicitly disclose further comprising developing the income statement.

Agarwal teaches an inventory management system and method with the feature of developing the income statement (claim 8; determining a profitability level, which is construed as an income statement).

From this teaching of Agarwal, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method and system for inventory management of Sheldon to include income statement taught by Agarwal in order to effectively provide service.

**As per claims 14 and 34**, Sheldon discloses the claimed invention but fails to explicitly disclose further comprising determining product storage, freight, labor, and packaging costs based on the gross material plan product characteristics relating to storage, freight, labor, and packaging requirements, and related costs.

Agarwal teaches an inventory management method and system with the feature of determining product storage, freight, labor, and packaging costs based on product characteristics relating to storage, freight, labor, and packaging requirements, and related costs (agarwal [0007]; discusses all cost links such as handling, which is construed as storage costs, transportation which is construed as freight costs, carrying which is construed as labor packaging costs).

The combination of Sheldon and Agarwal disclose the claimed invention but fail to explicitly disclose a gross material plan.

Horne teaches a system and method for allocating the supply of critical material components and manufacturing capacity with the feature of a gross material plan (col. 39, lines 22 – 35; discusses a material plan).

From this teaching of Agarwal and Horne, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method and system for inventory management of Sheldon to determination of product storage, freight, labor and packaging costs taught by Agarwal and the material plan taught by Horne, in order to effectively provide service.

**As per claim 15 and 35**, Sheldon discloses the claimed invention but fails to explicitly further disclose comprising determining the product cost based on a staggered production cost, a roll out set up cost and product storage, freight, labor, and packaging costs.

Horne teaches a system and method for allocating the supply of critical material components and manufacturing capacity with the feature of determining the product cost based on a staggered production cost (col. 2, lines 32 – 39; discuss production costs), a roll out set up cost (table 3; cost element rate code).

However the combination of Sheldon and Horne fail to explicitly disclose product storage, freight, labor, and packaging costs.

Agarwal teaches an inventory management system and method with the features of product storage, freight, labor, and packaging costs (agarwal [0007]; discusses all

cost links such as handling, which is construed as storage costs, transportation which is construed as freight costs, carrying which is construed as labor packaging costs).

From this teaching of Agarwal and Horne, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method and system for inventory management of Sheldon to determination of product storage, freight, labor and packaging costs taught by Agarwal and the staggered production cost and roll out set up cost taught by Horne, in order to effectively provide service.

**As per claims 18 and 38**, Sheldon discloses the claimed invention but fails to explicitly disclose comprising determining a releasing plan by assuming a volume based on the gross material plan as a fraction of the predetermined amount of time.

Agarwal teaches an inventory management system and method with the feature of comprising determining a releasing plan by assuming a volume (agarwal [0079] discusses a replenishment order released which is construed as a releasing plan when stock reaches x, which is construed as a volume) .

However, the combination of Sheldon and Agarwal fails to explicitly disclose the gross material plan and a fraction of the predetermined amount of time.

Horne teaches a system and method for allocating the supply of critical material components and manufacturing capacity with the feature of a gross material plan and a fraction of the predetermined amount of time (col. 39, lines 36 - 47; discusses material plan over a time span).

From this teaching of Agarwal and Horne, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method and system for inventory management of Sheldon to determination of releasing plan taught by Agarwal and the gross material plan and roll out set up cost taught by Horne, in order to effectively provide service.

**5. Claims 11 – 13, 16, 17, 19 , 20, 31, 32, 33, 36, 37, 39 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sheldon et al. (5,765,143) in view of Horne (7,058,587).**

**As per claims 11 and 31**, Sheldon discloses an inventory forecasting method and system, comprising:

receiving a product total ([abstract]; the computer which generates the order data, which is construed as a product total) and a probability of product failure over a predetermined amount of time (col. 4, see equation:  $R_{sub.a}$  is the failure rate per period P);

based on the product total ([sheldon abstract]; generating order data) and the probability of product failure (col. 4, see equation:  $R_{sub.a}$  is the failure rate per period P per vehicle of age "a" for the part);

However, Sheldon fails to explicitly disclose determining a gross material plan for a lifetime and determining a product cost based on the gross material plan.



Horne teaches a system and method for allocating the supply of critical material components and manufacturing capacity with the feature of determining a gross material plan for a lifetime (col. 1, lines 28 - 30: a solution that optimizes material planning, which is construed as a gross material plan, based on product life cycles) and determining a product cost based on the gross material plan ([abstract]: optimize critical material planning decisions and dynamically substitute and allocate constrained materials. The result is a quick and dramatic reduction in cycle time and material costs).

From this teaching of Horne, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method and system for inventory management of Sheldon to include the gross material plan and determining a product cost based on the gross material plan taught by Horne in order to effectively provide service.

**As per claims 12 and 32**, further comprising determining a staggered production cost based on the gross material plan (col. 39, lines 22 – 35; discusses a material plan), a product production cost (col. 16, lines 63 – 67; discusses a standard cost for each part), and a product minimum quantity (col. 5, lines 25 - 59; discusses a minimum quantity).

**As per claims 13 and 33**, further comprising determining a roll out set up cost (horne; see table 3; cost element rate code) based on the gross material plan (col. 39, lines 22 – 35; discusses a material plan), a product minimum quantity (col. 5, lines 25 -

59; discusses a minimum quantity), and an estimated set up cost (horne (5); discusses costs associated with the actions of positioning the right materials effectively which is construed as set up costs).

**As per claim 16 and 36**, Sheldon further discloses, comprising determining an individual product price based on the product cost and a profit margin (col. 15, lines 46 – 78; discuss selling price based product cost and profit margins).

**As per claims 17 and 37**, Sheldon further discloses, comprising recording statistically averaged probabilities of product failure over a service term (col. 9 lines 44 – 48; describes the statistically derived failure rate for a part).

**As per claims 19 and 39**, Sheldon further comprising developing a customer quote (col. 15, line 47; determining the selling price, which is construed as a customer quote) based on a staggered material cost determined as a function of the gross material plan (col. 39, lines 22 – 35; discusses a material plans).

**As per claims 20 and 40**, Sheldon discloses the claimed invention but fails to explicitly further disclose, comprising developing an income statement based on the individual product price and a product volume determined as a function of the gross material plan.

Horne teaches a system and method for allocating the supply of critical material components and manufacturing capacity with the feature of further comprising

developing an income statement based on the individual product price and a product volume determined as a function of the gross material plan (col. 1, lines 52 – 60; ; Existing supply chain management techniques use linear programming to maximize profits in view of various constraints, such as expected sales volumes, prices, and costs).

From this teaching of Horne, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method and system for inventory management of Sheldon to include the income statement taught by Horne in order to provide adequate information.

**6. Claims 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sheldon et al. (5,765,143) in view of Horne (7,058,587).**

**As per claim 41**, Sheldon further discloses, comprising:

breaking historical data (col. 12, lines 52 – 65; testing the modeling method implemented by the host computer by using historical data), crash data, down into data points (col. 13, line 5; order point calculation, which is construed as including data points) based on product categories including at least one of product composition, product location, product sub-system, and product function (col. 13, lines 7 – 8; manufacturer stock classification coding, which is construed as product function);

analyzing the data points to determine a statistical average a product of the categories will fail over a product service term (col. 9, lines 44 – 48; The failure rate R for a part, and the relative market share S of store A, can be determined by well known

statistical techniques which analyze (in a well known manner) market data, and sales, inventory, and vehicle population data, which is construed as including data points and statistical average);

developing at least one actuarial table recording statistically averaged probabilities of product failure (col. 3 line 66 – col. 6 line 5; describes an actuarial method including failure rate);

However, Sheldon fails to explicitly disclose material shelf life data.

Horne teaches a system and method for allocating the supply of critical components and manufacturing capacity with the feature of material shelf life data (col. 13, lines 21 – 22; factors as limited shelf life).

From this teaching of Horne, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method and system for inventory management of Sheldon to include the material shelf life taught by Horne, in order to effectively provide service.

**7. Claims 42 - 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sheldon et al. (5,765,143) and Horne (7,058,587), further in view of Horne (7,058,587).**

**As per claim 42**, the combination of Sheldon and Horne discloses the claimed invention but fails to explicitly further disclose comprising developing a releasing plan based on the statistically averaged probabilities.

Agarwal teaches an inventory management system and method with the feature of further comprising developing a releasing plan ([0079] describes an order replenishment system for a release of products) based on the statistically averaged probabilities ([0086]; the average proportion  $p$  of non-defective spares).

From this teaching of Agarwal, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method and system for inventory management taught by Sheldon to include the releasing plan taught by Agarwal in order to provide service.

**As per claim 43**, Sheldon discloses the claimed invention but fails to explicitly further disclose comprising releasing products according to the releasing plan.

Agarwal teaches an inventory management system and method with the feature of comprising releasing products according to the releasing plan ([0079] describes an order replenishment system for a release of products).

From this teaching of Agarwal, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method and system for inventory management taught by Sheldon to include the releasing plan taught by Agarwal in order to provide service

**As per claim 44**, Sheldon further discloses, comprising tracking anomalies corresponding to deviations from expected results (col. 12, lines 59 - 65; apply historical deviations from the model's projections as a means of adjusting for unknown factors).

However Sheldon fails to explicitly disclose releasing products according to the releasing plan.

Agarwal teaches an inventory management system and method with the feature of releasing products according to the releasing plan ([0079] describes an order replenishment system for a release of products).

From this teaching of Agarwal, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method and system for inventory management taught by Sheldon to include the releasing plan taught by Agarwal in order to provide service.

**As per claim 45**, Sheldon discloses employing tracked anomalies (col. 12, lines 59 - 65; to apply historical deviations from the model's projections as a means of adjusting for unknown factors) in results in an actuarial table development and correction process (col. 3 line 66 – col. 4 line 5; describes an actuarial method, that includes the product sales).

However, Sheldon fails to explicitly disclose releasing products according to the releasing plan as feedback.

Agarwal teaches an inventory management system and method with the feature of releasing releasing products according to the releasing plan as feedback ([0079] describes an order replenishment system for a release of products).

From this teaching of Agarwal, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method and system for

inventory management taught by Sheldon to include the releasing plan taught by Agarwal in order to provide service.

**8. Claims 46 – 48 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sheldon et al. (5,765,143) in view of Horne (7,058,587).**

**As per claim 46**, Sheldon discloses an automotive vehicle part inventory forecasting method, comprising:

accessing an actuarial table populated with statistically averaged probabilities of automotive vehicle part failure over a predetermined period of time (col. 3 line 66 – col. 4 line 5; describes an actuarial method, that includes the failure rate per period);

receiving a total number relating to an automotive vehicle part under service during a service term (col. 1, lines 49 – 55; discusses a total number relating to an automotive part); and

However, Sheldon fails to explicitly disclose generating a gross material plan based on the total number and a statistically averaged probability of failure relating to the automotive vehicle part under service wherein the gross material plan specifies a likely number of required replacement parts during at least one of the service term and a portion thereof.

Horne teaches a system and method for allocating the supply of critical material components and manufacturing capacity with the feature of generating a gross material plan (horne; col. 1, lines 28 - 30: a solution that optimizes material planning, which is construed as a gross material plan) based on the total number and a statistically

averaged probability of failure relating to the automotive vehicle part under service (Horne; col. 9, lines 7 – 25; discusses an actuarial method where the forecast is determined based on the failure rate per time period P) wherein the gross material plan specifies a likely number of required replacement parts during at least one of the service term and a portion thereof (col. 10, lines 17 – 36; discusses a number of needed placement parts).

From this teaching of Horne, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method and system for inventory management of Sheldon to include the material plan taught by Horne, in order to effectively provide service.

**As per claim 47**, Sheldon further discloses, comprising determining an individual replacement part price (col. 15, lines 47 - 59; discusses selling price)

However, Sheldon fails to explicitly disclose, as a function of the gross material plan.

Horne teaches a system and method for allocating the supply of critical material components and manufacturing capacity with the feature of a gross material plan (col. 39, lines 38 – 40; the PCA will determine the ending inventory (cost) for each and every part in the user's material plan).

From this teaching of Horne, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method and system for



inventory management of Sheldon to include the gross material plan taught by Horne in order to provide adequate information.

**As per claim 48**, Sheldon further discloses, comprising determining at least one of a customer quote and an income statement based on the individual product price (col 15, lines 47 – 58; discusses determining the selling price which is construed as a customer quote and income statement) .

However, Sheldon fails to explicitly disclose and an estimated product volume determined as a function of the gross material plan.

Horne teaches a system and method for allocating the supply of critical material components and manufacturing capacity with the feature of an estimated product volume determined as a function of the gross material plan (horne; Existing supply chain management techniques use linear programming to maximize profits in view of various constraints, such as expected sales volumes, prices, and costs).

From this teaching of Horne, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method and system for inventory management of Sheldon to include the estimated product volume taught by Horne in order to further provide adequate information.

**As per claim 50**, Sheldon further discloses comprising accessing the table based on automotive vehicle part composition, location of the automotive vehicle part on the automotive vehicle, membership of the automotive vehicle part in an automotive vehicle part sub-system, and a function of the automotive vehicle part in a context of the

automotive vehicle (col. 1, lines 14 – 26; describe inventories, which are construed as tables, of aftermarket automotive parts).

**9. Claim 49 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sheldon et al. (5,765,143) and Horne (7,058,587), further in view of Agarwal (2003/0101107).**

**As per claim 49**, the combination of Sheldon and Horne discloses, further comprising a gross material plan (col. 1, lines 28 - 30: a solution that optimizes material planning, which is construed as a gross material plan, based on product life cycles).

However, the combination of Sheldon and Horne fails to further disclose a releasing plan adapted to accomplish automatic release of replacement automotive vehicle parts to a supply base.

Agarwal teaches an inventory management system and method with the feature of a releasing plan adapted to accomplish automatic release of replacement automotive vehicle parts to a supply base ([0079]; When the number of components in stock reaches x, a replenishment order is released, and a selected quantity (discussed hereinafter) of the components are ordered).

From this teaching of Agarwal, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Sheldon and Horne to include the releasing plan taught by Agarwal in order to provide efficiency.

***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Bieda et al. (US 20030171897 A1), which discloses a product performance integrated database apparatus and method, Brinkley (US 5963919 A), which discloses an Inventory management strategy evaluation system and method, Olsson (US 7283932 B2), which discloses a method for estimating damage to an object, and method and system for controlling the use of the object, Pokorny et al. (US 20030154144 A1), which discloses Integrating event-based production information with financial and purchasing systems in product manufacturing, Ferreri et al. (US 7289968 B2), which discloses forecasting demand for critical parts in a product line, and Feign (US 6006196 A), which discloses a method of estimating future replenishment requirements and inventory levels in physical distribution networks.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Oluseye Iwarere whose telephone number is (571)270-5112. The examiner can normally be reached on Monday to Thursday 7:30am to 5 (EDT).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynda Jasmin can be reached on (571) 272-3033. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Elaine Gort/  
Primary Examiner, Art Unit 3627

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